

FIG. 1

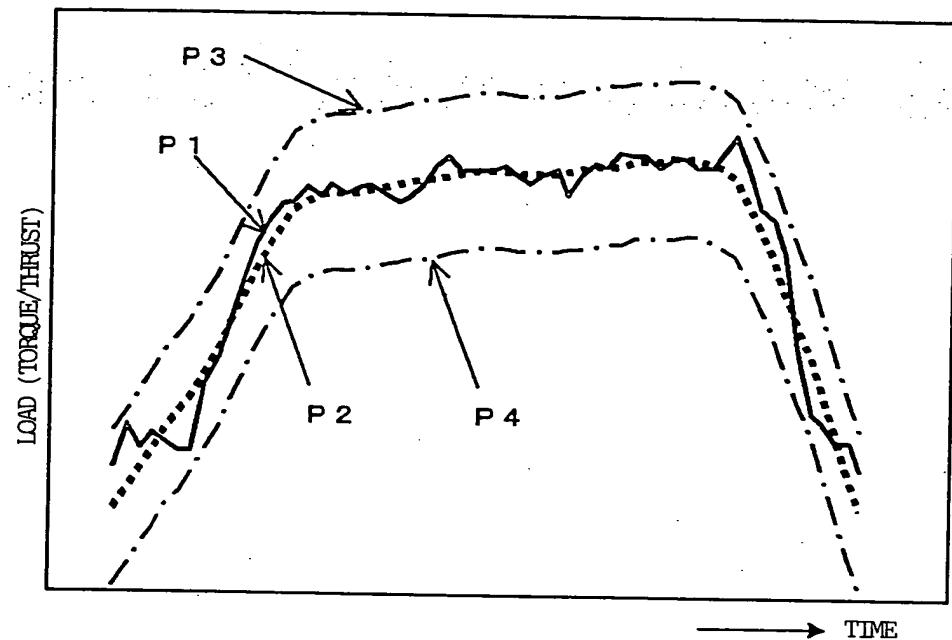


FIG. 2

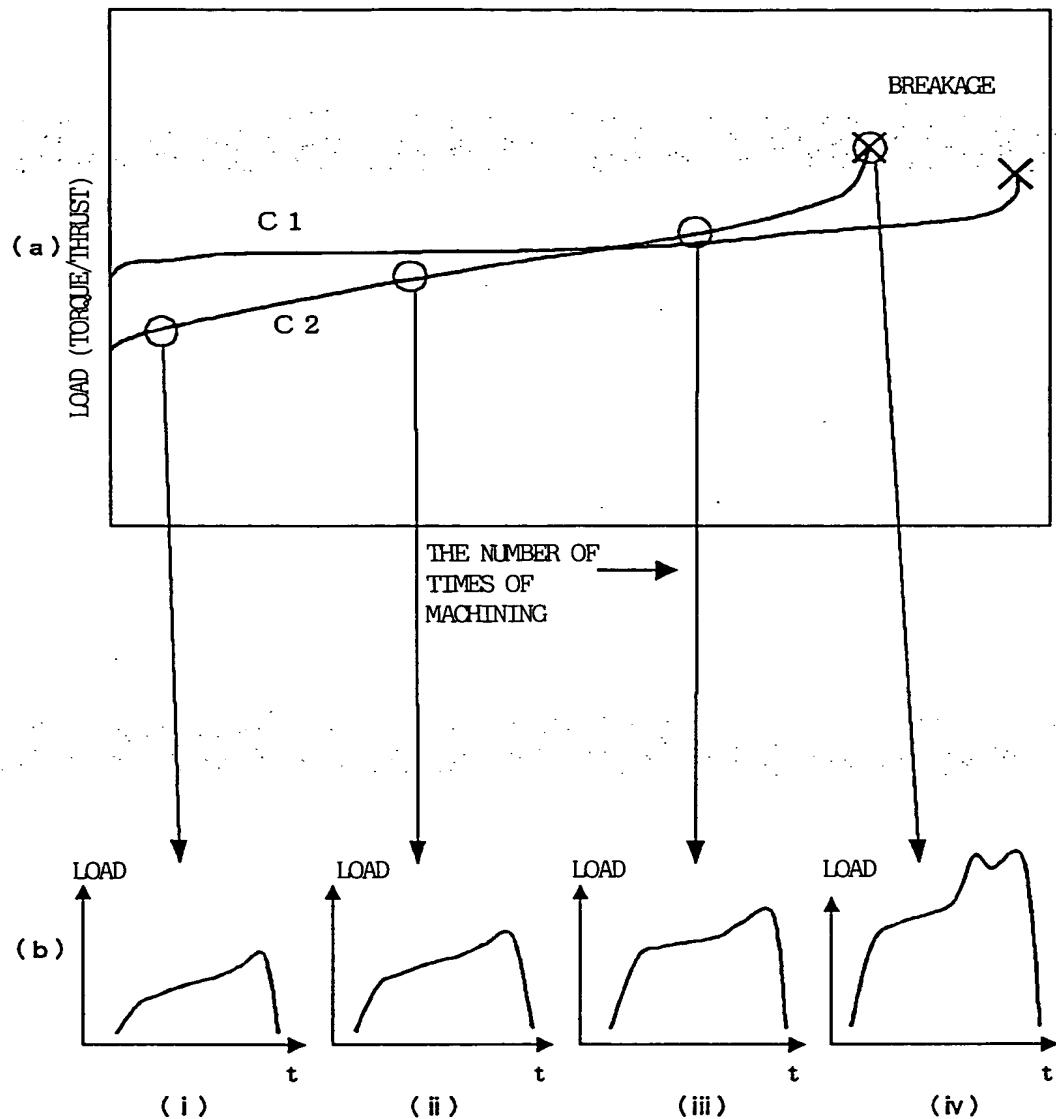
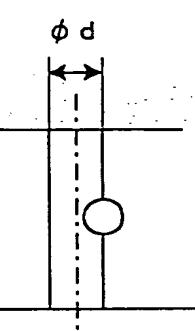
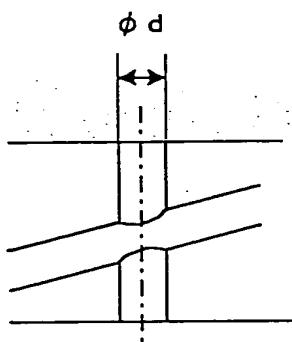
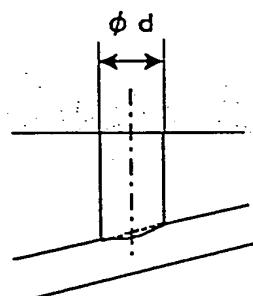
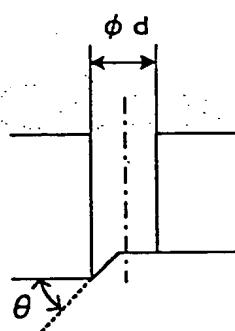
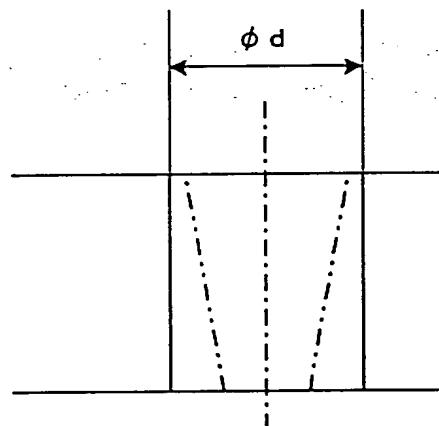
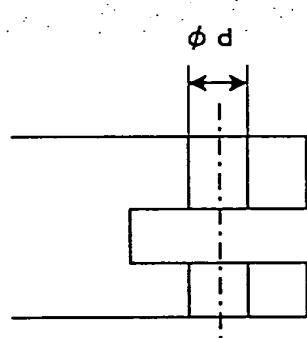


FIG. 3



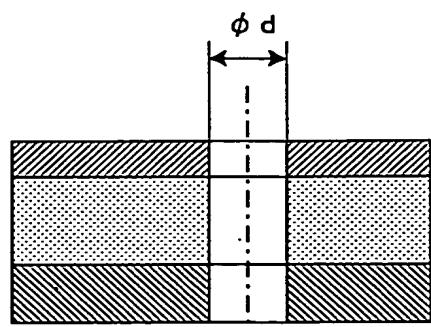
(a)

(b)



(c)

(d)



(e)

FIG. 4

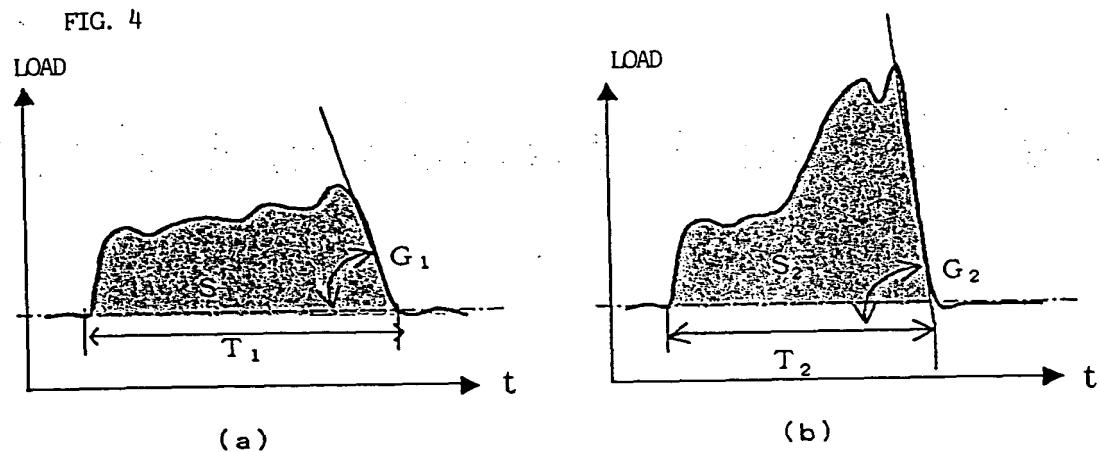


FIG. 5

ϕ 2.5CARBIDE DRILL · S50C · S8000 · F3200

● Z AXIS LOAD TORQUE

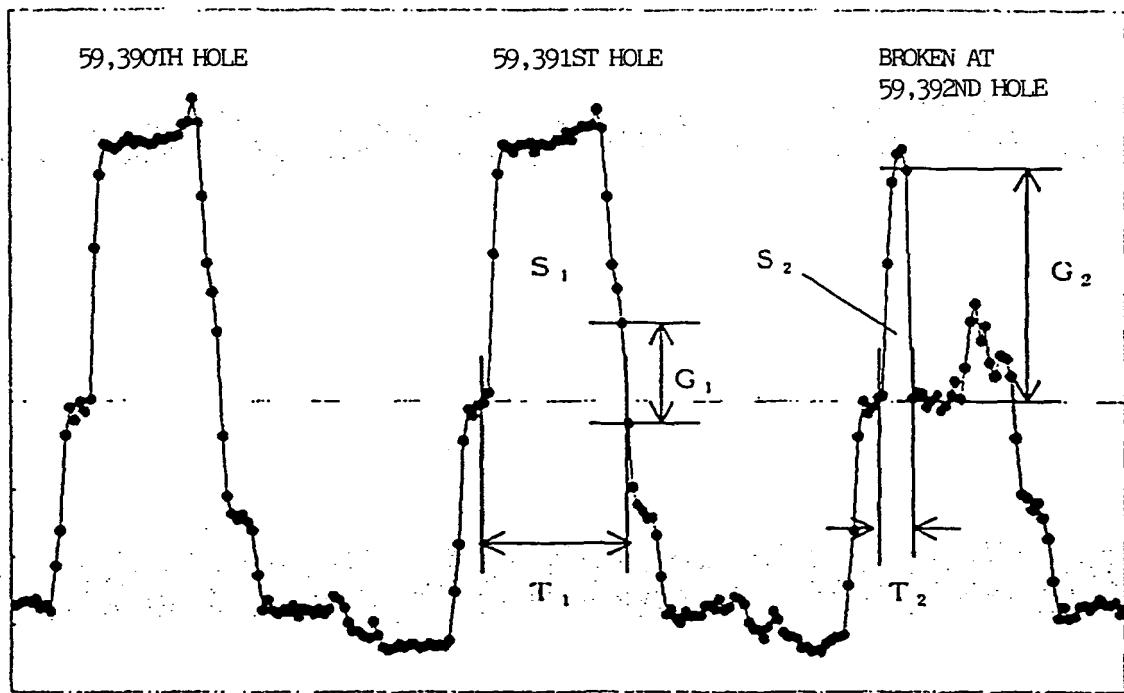


FIG. 6

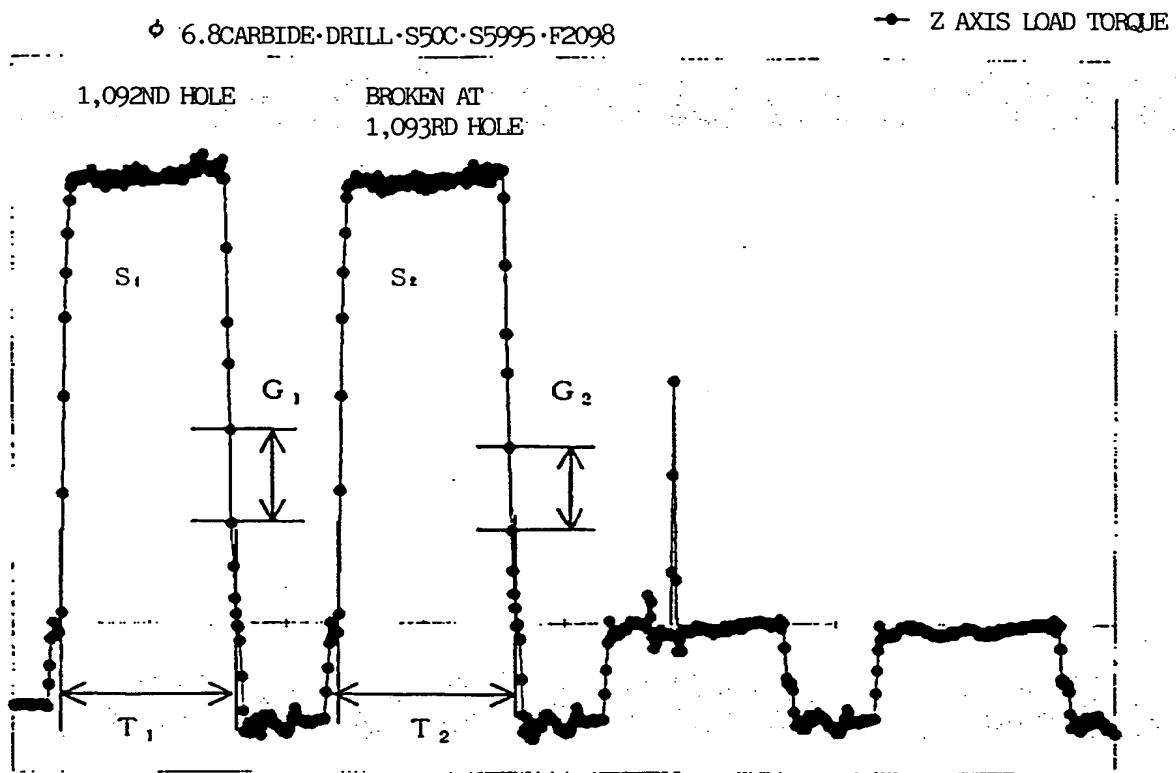


FIG. 7

 ϕ 3.3 HIGH-SPEED-STEEL DRILL · S50C · S2895 · F666

— X AXIS LOAD TORQUE

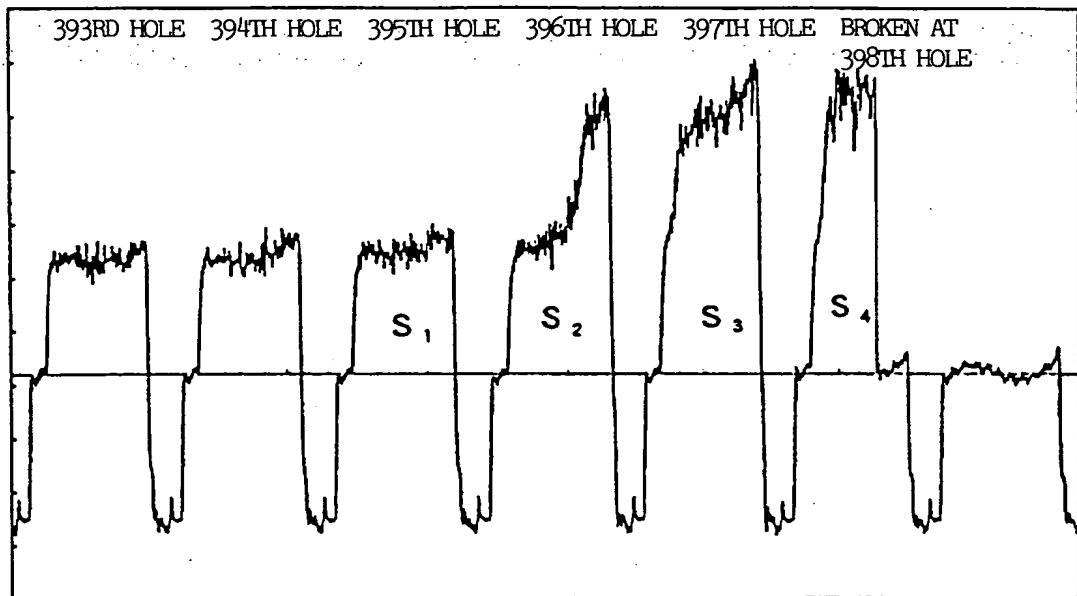


FIG. 8

 ϕ 2.5 CARBIDE DRILL · S50C · S7898 · F3159

— Z AXIS LOAD TORQUE

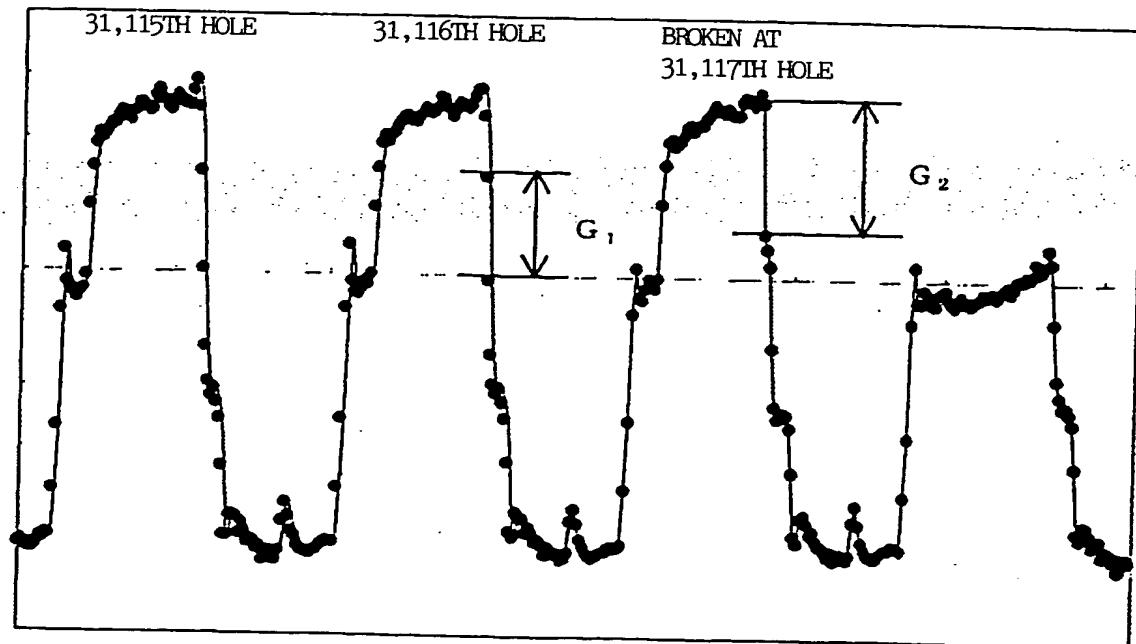


FIG. 9

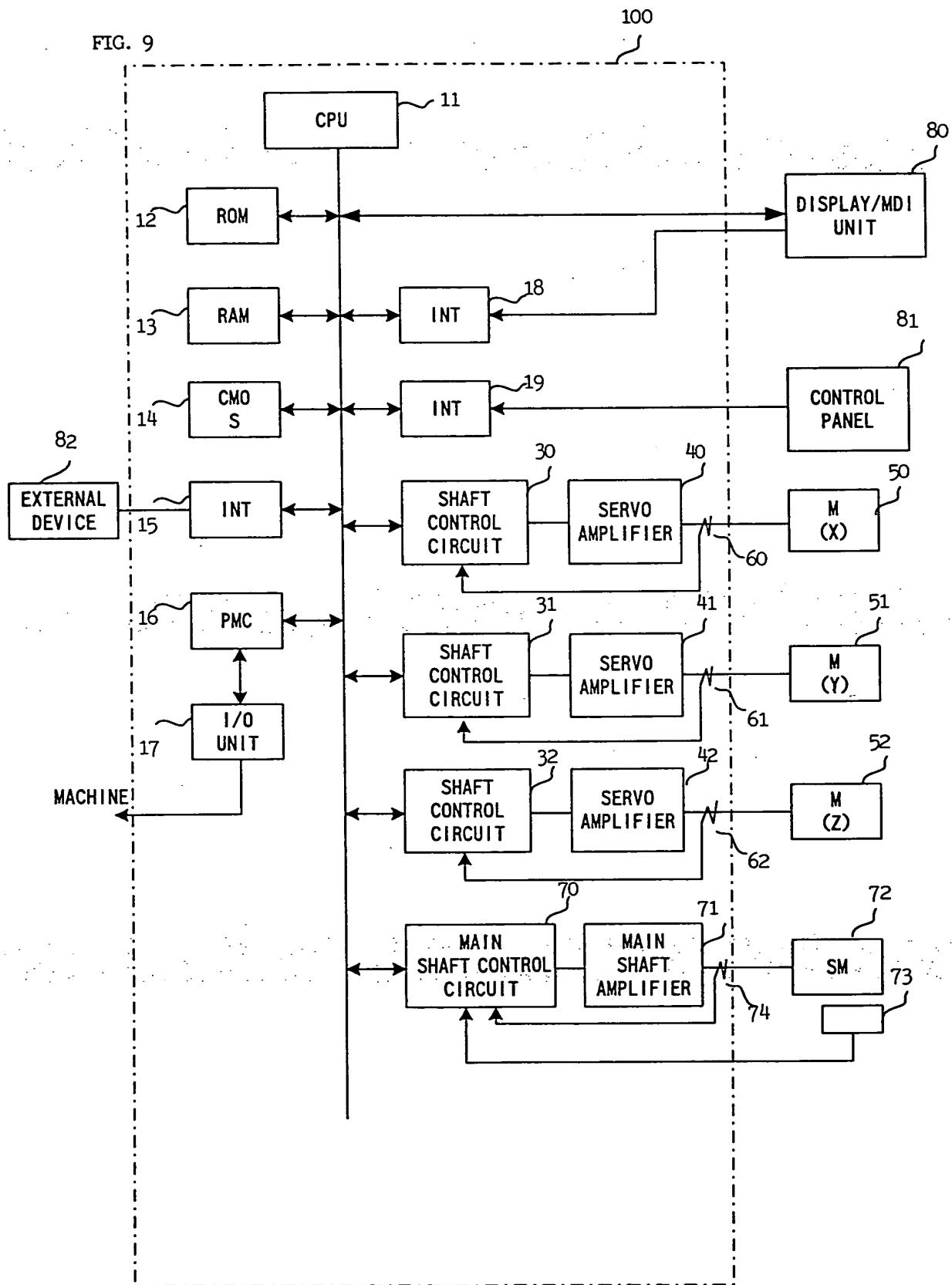


FIG. 10

